

**ANNOUNCEMENT FOR THE OPENING OF AN INTERNATIONAL SELECTION TENDER  
PROCEDURE FOR DOCTORATE HIRING OF DECREE-LAW NO. 57/2016 OF 29 AUGUST,  
AMENDED BY 57/2017 LAW OF 19 JULY**

**Internal reference: Researcher/NORTE\_INFRAESTRUTURAS/IBMC /1811/2021**

The meeting of the Board of Directors of IBMC deliberated the opening of an international selection tender for 1 vacancy of doctorate for the exercise of technological development activities in the area of Life and Health Sciences, under a work contract with non-fixed term under the Portuguese labor Law in order to perform duties under the project with the reference NORTE-01-0145-FEDER-085468 and the title "PT-OPENSREEN: National Infrastructure for Biological Chemistry and Genetics" at IBMC, financed by the Northern Regional Operational Program and supported by the European Regional Development Fund.

**1. Summary of the project:**

PT-OPENSREEN is a national network of research centers in Chemistry and Biology that provides libraries of compounds and biological extracts, biochemical, cellular and animal model assays for screening, optimization of the structure of compounds and subsequent studies on their activities and mechanisms of action. The Consortium aims to 1) unite traditional fields of research such as cellular, molecular and structural biology, and organic and medicinal chemistry; 2) operate an infrastructure equipped with state-of-the-art technology for basic and applied research in the areas of biological chemistry and genetics, providing free access to users; 3) build a national library of chemical compounds; and 4) coordinating Portugal's participation in the European EU-OPENSREEN infrastructure. Ultimately, PT-OPENSREEN's mission is to identify new molecular tools for the discovery of new chemical or biological entities with potential therapeutic applications.

The technology to be used in the project, based on instruments that allow the miniaturization of assays and the automation of protocols, will allow the rapid and systematic tracking of the activity of tens of thousands of compounds in the most varied assays, reducing the cost per sample. This technology generates a huge amount of data that will be analyzed through image/data analysis tools and cured through the use of specialized databases.

To advance the aforementioned project, it is necessary to hire a highly motivated employee to implement:

- Bioimage analysis solutions; images from phenotypic screening
- Data extraction, treatment and analysis solutions
- Management of compound library databases and biological extracts
- Management of large-scale screening results databases

**2. Applicable law**

- Decree-Law no. 57/2016 of 29 August, amended by Law 57/2017 of 19 July, which approved the doctorate hiring regime destined to stimulate scientific and technological employment for all knowledge areas (RJEC).
  - Regulatory Decree Nr 11-A / 2017, of 29th December.
  - Portuguese labor law.
3. Pursuant to article 13 of RJEC, the tender selection panel shall be formed by: António Pombinho (President); Other members: André Maia, Paula Sampaio and Mónica Sousa.
4. Workplace: IBMC – Rua de Alfredo Allen, 208, 4200-135 Porto, scientific platform for large scale screenings (“BioSciences Screening”).
5. Monthly remuneration to be paid is that set by subheading a) nr.1 article 15 of RJEC and article nr 2 of the Regulatory Decree nr. 11-A/2017, corresponding to level 33 of the Tabela Remuneratória Única, approved by Order no. 1553-C/2008 of December 31st, i.e. 2.134,73 Euros.
6. Any national, foreign and stateless candidate(s) who hold a doctorate degree in Biochemistry or related scientific area and a scientific and professional curriculum whose profile is suited for the activity to be performed can submit their applications. In the event the doctorate degree was awarded by a foreign higher education institution, said degree must comply with the provisions of Decree-Law no. 66/2018 of 16 October, and all formalities established therein must be complied.
7. The tender admission requirements are
- Doctor's degree in computer engineering, mathematics, computer science, physics, biological sciences, or similar;
  - Solid knowledge of mathematics and statistics;
  - High level of computer literacy;
  - Consolidated experience in advanced digital image analysis in the context of life sciences / health;
  - Demonstrated experience in building and implementing complex workflows for bioimage analysis automation specifically designed to answer particular scientific questions;
  - Expertise as an advanced user, developer of multidimensional bioimage visualization and analysis programs such as ImageJ/Fiji, Ilastik and Imaris;
  - Expertise with “Machine Learning” artificial intelligence methodologies, including “deep-learning”, applied to data analysis;
  - Experience in technologies of Data Science area such as Python, R and Matlab as well as data extraction, treatment and analysis;
  - Knowledge of relational databases (MySQL, MongoDB or Oracle), creation,

maintenance and structuring of databases.

- Python experience, especially from libraries related to data processing (numpy, pandas, matplotlib, scipy);
- Experience in teaching and organizing courses relevant to the intended functions;
- Big data knowledge and previous experience in supporting infrastructures of bioimage acquisition and analysis are valued.

8. Pursuant to article 5 of RJEC, selection is to be made based on candidate scientific and curricular career evaluation.

The evaluation of the scientific and curricular path focuses on relevance, quality and timeliness:

a) Scientific and technological production of the last five years considered most relevant by the candidate;

b) Applied or practice-based research activities carried out in the last five years and considered to have the greatest impact by the candidate;

c) The activities of extension and dissemination of knowledge developed in the last five years, namely in the context of promoting culture and scientific practices, considered of greatest relevance by the candidate;

9. The period of five years referred to in the previous number may be increased by the jury, at the candidate's request, when based on suspension of scientific activity for socially protected reasons, namely, for reasons of parental leave, prolonged serious illness, and other situations of unavailability for work that are legally protected.

10. The evaluation criteria are the scientific and curricular path:

Criteria a) Detailed Curriculum vitae (80%):

- Scientific training and relevant experience for the role according to the criteria admission specifics (50%);

- previous experience in supporting bioimage acquisition and analysis infrastructures (10%)

- Publications in international scientific journals with peer review, with emphasis on those that include the development of specific methods of bioimaging and data analysis (10%);

- Activities developed for the extension and dissemination of knowledge, such as courses and scientific meetings in the area of bioimage and data analysis (10%)

Criterion b) Motivation letter (20%): Interest and motivation for the area where the hiring profile fits.

11. Candidate final classification system shall be given based on a scale 0-100.
13. The panel shall deliberate by means of roll-call vote justified under adopted and disclosed selection criteria, with no abstentions allowed.
13. Minutes of panel meetings shall be executed and shall include a summary of all occurrences of said meeting, as well as of all votes casted by the members and respective reasoning, and shall be provided to candidates whenever required.
14. After selection criteria application, the panel shall prepare a sorted list of approved candidates and respective classification.
15. Panel's final decision shall be validated by the leader of the institution, who is also in charge of deciding about the hiring.
16. Applications shall include all supported documents encompassed by section 7 and 8 for tender admission, namely:
  - a) Certificate or diploma copy;
  - b) Curriculum vitae, written in English, detailed and structured pursuant to sections 10 and 12;
  - c) Other documentation relevant for the evaluation of qualifications in a related scientific area;

Candidates shall submit their application filling in the required information and supporting documentation, in a digital form, in PDF format, from 19th November to 3rd December 2021 at the link:

[https://dozer.i3s.up.pt/applicationmanagement/#/addapplications/ResearcherNORTE\\_INFRAES\\_TRUTURASIBMC18112021](https://dozer.i3s.up.pt/applicationmanagement/#/addapplications/ResearcherNORTE_INFRAES_TRUTURASIBMC18112021)

17. All candidates who formalize their applications in an improper way or fail to prove the requirements imposed by this tender are excluded from admission. In case of doubt, the panel is entitled to request any candidate to present further documentation supporting their statements.
18. False statements provided by the candidates shall be punished by law.
19. Both admitted and excluded candidate list and final classification list shall be published in the website of the Institute and the candidates are notified by email. After publication, all candidates have 10 working days to respond. Panel's final decisions are pronounced within a period of 90 days, from the application deadline, published at IBMC website.

The expected starting date is 1st January 2022.

20. This tender is exclusively destined to fill this specific vacancy and can be terminated at any time until approval of final candidate list, expiring with the respective occupation of said vacancy.

21. Non-discrimination and equal access policy: IBMC actively promotes a non-discrimination and equal access policy, wherefore no candidate can be privileged, benefited, impaired or deprived of any rights whatsoever, or be exempt of any duties based on their ancestry, age, sex, sexual preference, marital status, family and economic conditions, instruction, origin or social conditions, genetic heritage, reduced work capacity, disability, chronic illness, nationality, ethnic origin or race, origin territory, language, religion, political or ideological convictions and union membership.

22. Pursuant to Decree-Law no. 29/2001 of 3 February, disabled candidates shall be preferred in a situation of equal classification, and said preference supersedes any legal preferences. Candidates must declare, on their honour, their respective disability degree, type of disability and communication/expression means to be used during selection period on their application form, under the regulations above.

23. The panel has approved this announcement in meeting held on 17/11/2021.